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- (71) Applicant (for all designated States except US): DOW GLOBAL TECHNOLOGIES INC. [US/US]; Washington Street, 1790 Building, Midland, MI 48674 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): SCHUBERT, Craig, N. [US/US]; 220 Moss Rose Lane, Lake Jackson, TX 77566 (US). ASHCRAFT, Arnold, C. [US/US]; 838 Perrineville Road, Perrineville, NJ 08535 (US).
- (74) Agent: KARADZIC, Dragan, K.; The Dow Chemical Company, Intellectual Property Section, P.O. Box 1967, Midland, MI 48674-1967 (US).

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(54) Title: IMPROVED COMPOSITION AND METHOD FOR REMOVAL OF CARBONYL SULFIDE FROM ACID GAS CONTAINING SAME

$$R_1O-(Alk-O)_n-R_2$$
 (I)

$$R_3NHR_4OR_6$$
 (II)

$$R_5$$
 N
 R_5
(III)

(57) Abstract: Novel solvent composition for selective removal of COS from a gas stream containing same, said composition comprising a) at least one polyalkylene glycol alkyl ether of the formula (I) or 1.3-dimethyl-3,4,5,6-tetrahydro-2(1H)-pyrimidinone or a mixture of N-formylmorpholine and N-acetylmorpholine Wherein R₁ is an alkyl group having from 1 to 6 carbon atoms; R2 is hydrogen or an alkyl group having from 1 to 4 carbon atoms; Alk is an alkylene group, branced or unbranced, having from 2 to 4 carbon atoms, and n is from 1 to 10; and b) at least one alkanolamine compound of the formula (II) or at least one piperazine compound of formula (III) wherein R3 is hydrogen, an alkyl group having from 1 to 6 carbon atoms, or the R₄OH group; R₄ is a branched or unbranched alkylene group having from 1 to 6 carbon atoms; R₅, independently in each occurrence, is hydrogen or an hydroxyalkyl group having from 1 to 4 carbon atoms; and R₆ is hydrogen, an alkyl group having from 1 to 6 carbon atoms or an hydroxyalkyl group having from 1 to 4 carbon atoms.

